

## Grow

Zichen Ding and XiaoYa Ye, Shanghai Institute of Visual Arts, China  
Mentors: Chanjuan Chen, University of North Texas, USA  
Yi Jiang, Shanghai Institute of Visual Arts, China

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**Design Mentor Statement:** This design was a project outcome from a collaborative workshop done by Mentor A at Mentor B's university. The seven-weeks virtual workshop linked textile design and modularity to promote fashion sustainability. Mentor A introduced the student research on sustainability and modularity over virtual lectures, while Mentor B worked with the student in person in designing and creating the design through the application of research and advanced fashion techniques. Through the use of sustainable methods and a visually striking textile design made from digital textile printing, this design successfully achieved the goals of the workshop through the implementation of modularity and technology. The design research objective, market requirements, and strong visual impact were effectively conveyed through innovative textile design and styling techniques.

**Statement of purpose:** Modular design is a design method characterized by the use of standardized and independent units that can be combined in diverse arrangements to generate varied forms and offer multiple functionalities (Chen & Lapolla, 2021). Textile and apparel designers have explored the concept of modular design in the past. For example, Soepboer and Van Balgooi created Fragment Textiles, where they devised small wool shapes in the form of squares and stars (Stam & Eggink, 2014). In 2015, designer Martijn van Strien introduced The Post-Couture Collective, a label based in Rotterdam. This unique initiative enabled consumers to download modular components and assemble clothing designs themselves, eliminating the necessity for sewing machines (Tucker, 2015). This work is inspired by the current situation of land desertification. According to the World Health Organization (2020), land degradation has intensified in the 20th and 21st centuries due to the cumulative pressures of agricultural and livestock activities. These global processes are straining vital arable lands and pastures, impacting food, water, and air quality as well as pose complex effects on human health. Drawing inspiration from cactus plant, the aim of this design is to create a modular design that raises awareness about meaningful actions to combat land degradation.

**Aesthetic Properties and Visual Impact:** The design incorporates a modular approach inspired by the contour of a cactus, utilizing complementary shapes to minimize material waste. The color

palette features beige, brown, and green. The beige and brown represent the desert, while the green symbolizes the vibrant and hopeful nature of a cactus. The visual progression of the design, from bottom to top, represents the gradual resurgence of green in the desert, symbolizing hope for a beautiful environment. The fabric selection includes digitally printed textiles and faux leather, each with distinct structures and textures that harmoniously blend together. The interplay of colors and textures plays a vital role in the visual design. The overall silhouette consists of a hollow vest and wrapping skirt, complemented by a long and slender scarf to enhance the overall sense of depth and dimension.

**Process, Technique and Execution:** The process started with the creation of the textile print using Adobe Photoshop. A mixed of green and brown brush strokes were used to create an abstract print (Figure 1). The print was then digitally printed on heavy knit cotton fabric for later use. Next, we utilized Adobe Illustrator to create modules based on a rectangular system learned from a workshop on fashion sustainability and modularity. In order to reduce the waste of fabric as much as possible, many module unit designs were tested and finally the outline of cactus was adopted after experimentation. Functional cutouts were added to each side of the module to enable interlocking (Figure 2). Once the modular design was finalized, a laser cutter was employed to cut out all the modules on faux leather. Finally, the cut modules were assembled by interlocking them through the slots according to our initial sketch. The V-neck design of the top is simple and elegant, showing the wearer's neckline. Pair it with a thin and long scarf to increase the overall sense of hierarchy. Considering people of different sizes, the short skirts in the work are specially designed with darts, and the wearer can change the darts by increasing or decreasing the number of unit types according to the size of the waist.

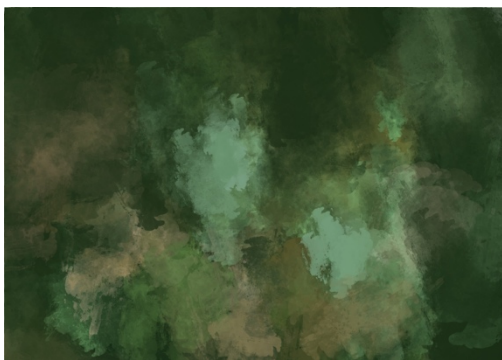


Figure 1. Print design.

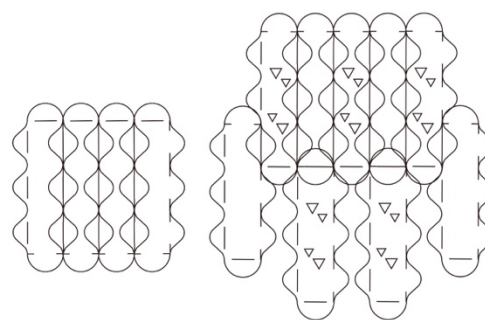


Figure 2. Module designs and their interlocking methods.

**Cohesion:** Despite being a sleeveless dress, the modular design allows for versatile transformations, enabling personalization and promoting sustainability. This design approach not

only reduces environmental pollution but also facilitates product maintenance, recycling, and disposal. By utilizing modular design to convey the theme of land desertification, it appeals to individuals to actively protect the environment.

**Originality and Innovation:** Given global climate change and increasing environmental concerns, sustainability has become a major focus in the fashion industry. Consumers are increasingly conscious of the environmental and social impact of clothing, prompting designers to reassess production methods and material choices. Through modular division and experimentation with various combinations, this design demonstrates originality and innovation. The unit shape, inspired by the contour of a cactus, minimizes fabric waste through complementary shapes during cutting and arrangement. The modular approach allows for creating diverse shapes and applying them to different areas of the clothing through horizontal and vertical arrangements as well as displacements. Furthermore, this method can be extended to the creation of accessories and derivative products.

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